

Annual Drinking Water Quality Report for 2012

AWQR

Amenia Water District #1

4988 Rt 22

Amenia, New York 12501

Public Water Supply ID# NY 1302759

INTRODUCTION

To comply with State regulations, The Amenia Water District #1, issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. If you have any questions about this report or concerning your drinking water, please contact NWS, the system operators, at 845-789-1307. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled town board meetings. The meetings are held every second and fourth Thursday of each month at 7:00pm in the town hall.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Our water system serves 305 service connections. Our water source is made up of 5 wells drilled at various depths located throughout the water district. At each of the well locations the water is treated with chlorine for disinfection purposes, it is then pumped directly into the distribution system. The unused water is stored in a 200,000 gallon storage tank located at Washington Court treatment facility.

The NYSDOH has completed a source water assessment for this system, based on available information, possible and actual threats to the drinking water sources were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. See section "Are there contaminants in our drinking water?" For a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future. The source water assessment has rated our water source as having an elevated susceptibility to microbiological, nitrates, industrial solvents, and other industrial contaminants. These ratings are due primarily to the residential and agricultural land use in the assessment area, as well as the close proximity of the wells to permitted discharge facilities (industrial commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and a hazardous substance spill. In addition, the wells draw from fractured bedrock and the overlying soils may not provide adequate protection from contamination. While the source water assessment has rated our wells as being susceptible to microbial, please note that our water is disinfected to ensure that the finished water delivered into your home meets all New York State's drinking water standards for microbial contaminations. County and state health departments will use this information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs. A copy of the assessment, including a map of the assessment area, can be obtained by contacting your water supplier or the Dutchess County Health Department.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total Coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate

that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Dutchess County Health Department at 845-486-3404.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
As (Arsenic) Well 4/4a	No	7/11/2012	0.0014	(mg/l) ⁴	0.010	0.010	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Be (Beryllium) Well 4/4a	No	7/11/2012	0.0003	(mg/l) ⁴	0.004	0.004	Discharge from metal refineries and coil-burning factories; Discharge from electrical, aerospace, and defense industries.
Cd (Cadmium) Well 4/4a	No	7/11/2012	0.001	(mg/l) ⁴	0.005	0.005	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Cr (Chromium) Well 4/4a	No	7/11/2012	0.0072	(mg/l) ⁴	0.10	0.10	Discharge from steel and pulp mills; Erosion of natural deposits.
Ni (Nickel) Well 4/4a	No	7/11/2012	0.0012	(mg/l) ⁴	n/a	n/a	Naturally occurring minerals
Sb (Antimony) Well 4/4a	No	7/11/2012	0.0004	(mg/l) ⁴	0.006	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Tl (Thallium) Well 4/4a	No	7/11/2012	0.0003	(mg/l) ⁴	0.002	0.002	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.
Ba (Barium) Well 4/4a	No	7/11/2012	0.0180	(mg/l) ⁴	2.00	2.00	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Se (Selenium) Well 4/4a	No	7/11/2012	0.0025	(mg/l) ⁴	0.05	0.05	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

<i>Table of Detected Contaminants</i>							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Hg (Mercury) Well 4/4a	No	7/11/2012	0.0002	(mg/l) ⁴	0.002	0.002	<i>Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.</i>
Fluoride Well 4/4a	No	7/11/2012	0.50	(mg/l) ⁴	2.2	2.2	<i>Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.</i>
Cyanide Well 4/4a	No	7/11/2012	0.0050	(mg/l) ⁴	0.2	0.2	<i>Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.</i>
As (Arsenic) Well 5/6	No	7/11/2012	0.0014	(mg/l) ⁴	0.010	0.010	<i>Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.</i>
Be (Beryllium) Well 5/6	No	7/11/2012	0.0003	(mg/l) ⁴	0.004	0.004	<i>Discharge from metal refineries and coil-burning factories; Discharge from electrical, aerospace, and defense industries.</i>
Cd (Cadmium) Well 5/6	No	7/11/2012	0.001	(mg/l) ⁴	0.005	0.005	<i>Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.</i>
Cr (Chromium) Well 5/6	No	7/11/2012	0.0010	(mg/l) ⁴	0.10	0.10	<i>Discharge from steel and pulp mills; Erosion of natural deposits.</i>
Ni (Nickel) Well 5/6	No	7/11/2012	0.0033	(mg/l) ⁴	n/a	n/a	<i>Naturally occurring minerals</i>
Sb (Antimony) Well 5/6	No	7/11/2012	0.0004	(mg/l) ⁴	0.006	0.006	<i>Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.</i>
Tl (Thallium) Well 5/6	No	7/11/2012	0.0003	(mg/l) ⁴	0.002	0.002	<i>Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.</i>

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Ba (Barium) Well 5/6	No	7/11/2012	0.078	(mg/l) ⁴	2.00	2.00	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Se (Selenium) Well 5/6	No	7/11/2012	0.0024	(mg/l) ⁴	0.05	0.05	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Hg (Mercury) Well 5/6	No	7/11/2012	0.0002	(mg/l) ⁴	0.002	0.002	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.
Fluoride Well 5/6	No	7/11/2012	0.50	(mg/l) ⁴	2.2	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Cyanide Well 5/6	No	7/11/2012	0.0050	(mg/l) ⁴	0.2	0.2	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
As (Arsenic) Well 1	No	7/11/2012	0.0014	(mg/l) ⁴	0.010	0.010	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Be (Beryllium) Well 1	No	7/11/2012	0.0003	(mg/l) ⁴	0.004	0.004	Discharge from metal refineries and coil- burning factories; Discharge from electrical, aerospace, and defense industries.
Cd (Cadmium) Well 1	No	7/11/2012	0.001	(mg/l) ⁴	0.005	0.005	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.
Cr (Chromium) Well 1	No	7/11/2012	0.0081	(mg/l) ⁴	0.10	0.10	Discharge from steel and pulp mills; Erosion of natural deposits.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Ni (Nickel) Well 1	No	7/11/2012	0.0017	(mg/l) ⁴	n/a	n/a	Naturally occurring minerals
Sb (Antimony) Well 1	No	7/11/2012	0.0004	(mg/l) ⁴	0.006	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Tl (Thallium) Well 1	No	7/11/2012	0.0003	(mg/l) ⁴	0.002	0.002	Leaching from ore- processing sites; Discharge from electronics, glass, and drug factories.
Ba (Barium) Well 1	No	7/11/2012	0.0150	(mg/l) ⁴	2.00	2.00	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Se (Selenium) Well 1	No	7/11/2012	0.0021	(mg/l) ⁴	0.05	0.05	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Hg (Mercury) Well 1	No	7/11/2012	0.0002	(mg/l) ⁴	0.002	0.002	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.
Fluoride Well 1	No	7/11/2012	0.50	(mg/l) ⁴	2.2	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Cyanide Well 1	No	7/11/2012	0.0050	(mg/l) ⁴	0.2	0.2	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Nitrate Well 1	No	8/1/2012	2.2	mg/l	10	10	Runoff from fertilizer use, Leaching from septic tanks, Sewage; Erosion of natural deposits.
Nitrate Well 4/ 4a	No	8/1/2012	3.5	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tank, Sewage; Erosion of natural deposits.

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Nitrate Well 5 / 6	No	8/1/2012	2.1	mg/l	10	10	<i>Runoff from fertilizer use; Leaching from septic tanks, Sewage; Erosion of natural deposits.</i>
Copper ¹	No	6/21/2011	0.08 Range 0.016- 0.141	mg/l	1.3	1.3	<i>Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives,</i>
Lead ²	No	6/21/2011	0.005 Range <0.001-0.012	mg/l	0	0.015	<i>Corrosion of household plumbing systems; Erosion of natural deposits.</i>
Gross Alpha Well 1	No	1/20/2010	0.1	pci/l	15	15	<i>Erosion of natural deposits</i>
Gross beta Well 1	No	1/20/2010	2.6	pci/l	50	50	<i>Decay of natural deposits and man- made emissions.</i>
Radium-226+228 Well 1	No	1/20/2010	0.397	pci/l	5	5	<i>Erosion of natural deposits</i>
Uranium Well 1	No	1/20/2010	3.6	ug/l	30	30	<i>Erosion of natural deposits</i>
Uranium Well 4/4a		1/20/2010	1.6	ug/l	30	30	<i>Erosion of natural deposits</i>
Gross Alpha Well 4/4a	No	1/20/2010	0	pci/l	15	15	<i>Erosion of natural deposits</i>
Gross beta Well 4/4a	No	1/20/2010	2.1	pci/l	50	50	<i>Decay of natural deposits and man-made emissions.</i>
Radium-226+228 Well 4/4a	No	1/20/2010	0.80	pci/l	5	5	<i>Erosion of natural deposits</i>
Gross Alpha Well 5/6	No	1/20/2010	1.1	pci/l	15	15	<i>Erosion of natural deposits</i>
Gross beta Well 5/6	No	1/20/2010	4.5	pci/l	50	50	<i>Decay of natural deposits and man- made emissions.</i>
Radium-226+228 Well 5/6	No	1/20/2010	0.91	pci/l	5	5	<i>Erosion of natural deposits</i>
Uranium Well 5/6	No	1/20/2010	4.07	ug/l	30	30	<i>Erosion of natural deposits</i>

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Haloacetic Acids Haa5 Well 1	No	8/1/2012	0.0001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms
Total Trihalomethanes TTHM Well 1	No	8/1/2012	0.0005	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Total Trihalomethanes TTHM Well 4/4a	No	8/1/2012	0.0013	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Haloacetic Acids Haa5 Well 4/4a	No	8/1/2012	0.001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms.
Total Trihalomethanes TTHM Well 5/6	No	8/1/2012	0.0005	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Haa5 Haloacetic Acids Well 5/6	No	8/1/2012	0.001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms.
Barium Well 1	No	5/21/2009	0.021	mg/l	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Haloacetic Acids Haa5 Well 1	No	8/1/2012	0.0001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms
Total Trihalomethanes TTHM Well 1	No	8/1/2012	0.0005	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Total Trihalomethanes TTHM Well 4/4a	No	8/1/2012	0.0013	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Haloacetic Acids Haa5 Well 4/4a	No	8/1/2012	0.001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms.
Total Trihalomethanes TTHM Well 5/6	No	8/1/2012	0.0005	mg/l	0.08	0.08	By-product of drinking water chlorination needed to kill harmful organisms. TTHM are formed when source water contains large amounts of organic matter.
Haa5 Haloacetic Acids Well 5/6	No	8/1/2012	0.001	mg/l	n/a	0.06	By-product of drinking water disinfections needed to kill harmful organisms.
Barium Well 1	No	5/21/2009	0.021	mg/l	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit MCL	Likely Source of Contamination
Barium Well 4/4a	No	5/21/2009	0.017	mg/l	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Barium Well 5/6	No	5/21/2009	0.009	mg/l	2.0	2.0	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

1 The level presented represents the 90th percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, ten samples were collected at your water system and the 90th percentile value was the 0.08 mg/l. The action level for copper was not exceeded at any of the sites tested. Copper Range 0.016 to 0.141

2 The level presented represents the 90th percentile of the (include number of samples, e.g. ten samples) samples collected. 10 sites were tested. Lead sampled range was <0.001 to 0.004

3 Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Amenia Water District#1 is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Definitions:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water, MCLs are set as close to the MCLGS as feasible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health, MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Non Detects (ND): Laboratory analysis indicates that the constituent is not present.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Nanogram per Liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion — ppq).

Picocuries per liter (pCi/l): A measure of the radioactivity in water.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2012, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a 10-15 minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.
- Use low flow shower heads and faucets.
- Water your lawn sparingly early morning or late evening.
- Do only full loads of wash and dishes.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make Improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.